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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/055,754

01/23/2002

Frederick K. Blades

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07/07/2004

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EXAMINER

LAIR, DONALD M

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/055,754	Applicant(s) BLADES, FREDERICK K.	
	Examiner Donald M. Lair	Art Unit 2858	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 18-21, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 18-21, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18 – 21, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endoh et al. (US-5,323,117) in view of Kobayashi et al. (US-5,949,230).

3. In regards to Claim 18, Endoh et al. discloses a device for locating a series arc fault at one or more series connection having a first end and a second end, the second end of the connections being coupled to a wire, the wire having a conductive layer and an outer insulation layer for sheathing the conductive layer, the device comprising:

a capacitive probe to sense a voltage at the second end of the connections (Element 8);
and

a floating high-impedance meter having a ground reference electrically coupled to the first end of the connections, the floating high-impedance meter being adapted to measure a voltage sensed by the capacitive probe and being further adapted to indicate the presence of the series arc fault when the measured voltage exceeds a predetermined level (Element 10; Column 1, lines 53 – 62). The reference fails to disclose the capacitive probe being connected to the wire by clamping to the outer insulation layer. The reference fails to explicitly disclose a display being coupled to the floating high-impedance meter.

Art Unit: 2858

4. Kobayashi et al. discloses a non-contact, capacitive voltage probe apparatus for clamping to the outer layer of a wire under test. (Column 2, lines 17 – 27; Column 11, lines 43 – 47).

Kobayashi et al. also teaches an embodiment comprising a display (Column 8, lines 14 – 18)

5. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Endoh et al. by replacing the capacitive probe with the external clamp-type capacitive probe disclosed by Kobayashi et al. for the purpose of enabling testing during use and also to avoid reducing the physical integrity of the wire under test.

6. In regards to Claim 19, Kobayashi et al. also teaches an embodiment comprising a display (Column 8, lines 14 – 18). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Endoh et al. by including a display attached to the measurement device, as disclosed by Kobayashi et al. for the purpose of monitoring the testing process.

7. In regards to Claims 20 and 36, Endoh et al. discloses the device described above, wherein the first end of the connections is connected to a power source (Fig. 1, element 10, grounded input), wherein the power source shares a common ground and the detecting apparatus has a grounded input.

8. In regards to Claim 21, the modified disclosure of Endoh et al. in view of Kobayashi et al. discloses a device according to the description above, but fails to disclose connecting the device to an airframe. However, the use of arc detectors to identify failed wiring integrity in aircraft is very well known in the art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by

Art Unit: 2858

Achatz by using it to test arc for arcing faults in an aircraft for the purpose of identifying faulty wiring before it results in critical failures (MPEP 2144.03).

9. In regards to Claim 35, Endoh et al. in view of Kobayashi et al. discloses the device described above, wherein the first end of the connections is connected to an energized terminal of a power source (Fig. 19, elements 10 and 4).

Response to Arguments

10. Applicant's arguments, see the Amendment, filed 04/02/04, with respect to Claims 1 – 10 have been fully considered and are persuasive. The rejection of Claims 1 – 10 has been withdrawn.

11. Applicant's arguments, see the Amendment, filed 04/02/04, with respect to the rejection(s) of claim(s) 18-21 under § 102(b) and § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Endoh et al. in view of Kobayashi et al. as detailed above.

Allowable Subject Matter

12. Claims 1 – 10 are allowed.

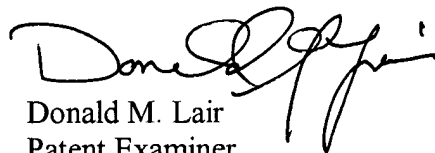
Art Unit: 2858

Conclusion

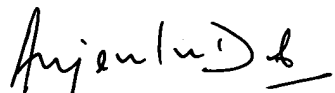
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald M. Lair whose telephone number is (571) 272-2232. The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald M. Lair
Patent Examiner
Art Unit 2858
July 1, 2004



**ANJAN DEB
PRIMARY EXAMINER**